



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

NB

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,116	07/02/2001	Takeo Seino	Q65302	5085

7590 10/24/2002

SUGHRUE, MION, ZINN  
MACPEAK & SEAS, PLLC  
2100 Pennsylvania Avenue, NW  
Washington, DC 20037-3213

EXAMINER

STEWART JR, CHARLES W

ART UNIT PAPER NUMBER

2853

DATE MAILED: 10/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/896,116

Applicant(s)  
Takeo Seino

Examiner  
Charles W. Stewart, Jr.

Art Unit  
2853



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on June 27, 2002 (Amendment Paper No. 7).
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

Art Unit: 2853

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 10, 18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barinaga et al. (US 5,777,646) in view of Childers et al. (US 6,375,301 B1).

Barinaga et al. discloses a maintenance cartridge (see fig. 8) for a recording apparatus to which an ink cartridge is to be mounted, the maintenance cartridge comprising:

a main body mountable (see fig. 10) to the recording apparatus at least at a same position as a position, at which the ink cartridge is to be mounted to the recording apparatus; and at least one plug element (see col. 9, lines 1-11) provided in a region corresponding to an ink supply port of the ink cartridge, for sealing an ink supply needle (162) that supplies ink to an ink jet recording head; a cylindrical portion (99, abstract) for guiding the ink supply needle; and a taper portion (54) for sealing an ink inlet hole of the ink supply needle; an inner surface of the taper portion (54) is adapted to closely contact the ink inlet hole; wherein at least one protruded rib (fig. 8) portion extending in an insertion direction of the ink supply needle is formed on an inner surface of the cylindrical portion.

Art Unit: 2853

However, Barinaga et al. does not disclose an outward form by which a detection system of a recording apparatus can identify the maintenance cartridge, wherein the outward form distinguishes the maintenance cartridge from an ink cartridge.

Nevertheless, Childers et al. disclose an outward form by which a detection system of a recording apparatus (fig. 2) can identify the maintenance cartridge (14), wherein the outward form distinguishes the maintenance cartridge from an ink cartridge (col. 3, lines 14-23).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Barinaga et al., with the teaching of an outward form by which a detection system of a recording apparatus can identify the maintenance cartridge, wherein the outward form distinguishes the maintenance cartridge from an ink cartridge, as taught by the invention of Childers et al., in order to provide a replaceable cartridge for use in an ink jet apparatus which enables a flushing of ink therefrom (col. 2, lines 1-3).

Barinaga et al. discloses a plurality of the plug elements (fig. 8) are provided correspondingly to an array of the ink supply needles (162) so that the main body and the plurality of the plug elements are provided as a single unit.

However, Barinaga et al. does not disclose the maintenance cartridge corresponds to and is replaceable with the single ink cartridge.

Nevertheless, Childers et al. disclose the maintenance cartridge (14) corresponds to and is replaceable with the single ink cartridge (24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Barinaga et al., with the maintenance cartridge

Art Unit: 2853

corresponds to and is replaceable with the single ink cartridge, as taught by the invention of Childers et al., for the purpose of flushing ink from elements of the an inkjet printer (col. 1, lines 7-8).

However, Barinaga et al. does not disclose the maintenance cartridge corresponding to and is replaceable with a plurality of the ink cartridge.

Nevertheless, Childers et al. disclose the maintenance cartridge (14) corresponding to and is replaceable with a plurality of the ink cartridge (6).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Barinaga et al., with the maintenance cartridge corresponding to and is replaceable with a plurality of the ink cartridge invention, as taught by the invention of Childers et al., in order to prevent the user from accidentally damaging the printer or producing a print job whose quality is degraded (col. 4, lines 56-58).

Barinaga et al. disclose the at least one plug element (fig. 9) prevent liquid from flowing out of the ink supply needle from the ink jet recording head.

However, Barinaga et al. does not disclose an memory device storing data concerning maintenance; wherein the data includes a message that is displayable in a monitor; wherein the memory device stores data for controlling supply of a negative pressure, which is used for filling ink into the recording head and /or for solving a clogged-up condition of nozzle opening.

Nevertheless, Childers et al. disclose an memory device (20) storing data concerning maintenance; wherein the data includes a message that is displayable in a monitor (44); wherein the memory device stores data for controlling supply of a negative pressure, which is used for

Art Unit: 2853

filling ink into the recording head and /or for solving a clogged-up condition of nozzle opening (col. 4, lines 23-35).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Barinaga et al. with an memory device storing data concerning maintenance; wherein the data includes a message that is displayable in a monitor; wherein the memory device stores data for controlling supply of a negative pressure, which is used for filling ink into the recording head and/or for solving a clogged-up condition of nozzle opening, as taught by the invention of Childers et al., for the purpose of monitoring the level of a flush fluid with the reservoir while printing (col. 3, lines 21-22).

Barinaga et al. discloses a recording head coupled to an ink supply passage, and wherein the at least one plug element liquid from flowing out of the ink supply passage from the recording head (col. 2, lines 8-17).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9, 11, 12-17, 22-31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barinaga et al. (US 5,777,646) in view of Childers et al. (US 6,375,301 B1).

Barinaga et al. discloses a maintenance cartridge (see fig. 8) comprising:

Art Unit: 2853

a main body mountable (see fig. 10) to the recording apparatus at least at a same position as a position, at which the ink cartridge is to be mounted to the recording apparatus; and at least one plug element (see col. 9, lines 1-11) provided in a region corresponding to an ink supply port of the ink cartridge, for sealing an ink supply needle (162) that supplies ink to an ink jet recording head; a cylindrical portion (99, abstract) for guiding the ink supply needle; and a taper portion (54) for sealing an ink inlet hole of the ink supply needle; an inner surface of the taper portion (54) is adapted to closely contact the ink inlet hole; wherein at least one protruded rib (fig. 8) portion extending in an insertion direction of the ink supply needle is formed on an inner surface of the cylindrical portion.

However, Barinaga et al. does not disclose an outward form by which a detection system of a recording apparatus can identify the maintenance cartridge, wherein the outward form distinguishes the maintenance cartridge from an ink cartridge.

Nevertheless, Childers et al. disclose an outward form by which a detection system of a recording apparatus (fig. 2) can identify the maintenance cartridge (14), wherein the outward form distinguishes the maintenance cartridge from an ink cartridge (col. 3, lines 14-23).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Barinaga et al., with the teaching of an outward form by which a detection system of a recording apparatus can identify the maintenance cartridge, wherein the outward form distinguishes the maintenance cartridge from an ink cartridge, as taught by the invention of Childers et al., in order to provide a replaceable cartridge for use in an ink jet apparatus which enables a flushing of ink therefrom (col. 2, lines 1-3).

Art Unit: 2853

Barinaga et al. discloses a plurality of the plug elements (fig. 8) are provided correspondingly to an array of the ink supply needles (162) so that the main body and the plurality of the plug elements are provided as a single unit.

However, Barinaga et al. does not disclose the maintenance cartridge corresponds to and is replaceable with the single ink cartridge.

Nevertheless, Childers et al. disclose the maintenance cartridge (14) corresponds to and is replaceable with the single ink cartridge (24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Barinaga et al., with the maintenance cartridge corresponds to and is replaceable with the single ink cartridge, as taught by the invention of Childers et al., for the purpose of flushing ink from elements of the an inkjet printer (col. 1, lines 7-8).

However, Barinaga et al. does not disclose the maintenance cartridge corresponding to and is replaceable with a plurality of the ink cartridge.

Nevertheless, Childers et al. disclose the maintenance cartridge (14) corresponding to and is replaceable with a plurality of the ink cartridge (6).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Barinaga et al., with the maintenance cartridge corresponding to and is replaceable with a plurality of the ink cartridge invention, as taught by the invention of Childers et al., in order to prevent the user from accidentally damaging the printer or producing a print job whose quality is degraded (col. 4, lines 56-58).



Art Unit: 2853

Barinaga et al. disclose the at least one plug element (fig. 9) prevent liquid from flowing out of the ink supply needle from the ink jet recording head.

However, Barinaga et al. does not disclose an memory device storing data concerning maintenance; wherein the data includes a message that is displayable in a monitor; wherein the memory device stores data for controlling supply of a negative pressure, which is used for filling ink into the recording head and /or for solving a clogged-up condition of nozzle opening.

Nevertheless, Childers et al. disclose an memory device (20) storing data concerning maintenance; wherein the data includes a message that is displayable in a monitor (44); wherein the memory device stores data for controlling supply of a negative pressure, which is used for filling ink into the recording head and /or for solving a clogged-up condition of nozzle opening (col. 4, lines 23-35).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Barinaga et al. with an memory device storing data concerning maintenance; wherein the data includes a message that is displayable in a monitor; wherein the memory device stores data for controlling supply of a negative pressure, which is used for filling ink into the recording head and/or for solving a clogged-up condition of nozzle opening, as taught by the invention of Childers et al., for the purpose of monitoring the level of a flush fluid with the reservoir while printing (col. 3, lines 21-22).

Barinaga et al. discloses a recording head coupled to an ink supply passage, and wherein the at least one plug element liquid from flowing out of the ink supply passage from the recording head (col. 2, lines 8-17).

Art Unit: 2853

*Response to Arguments*

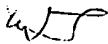
5. The amendment filed June 27, 2002 (Paper No. 7), with new claims 20-32 have been added in order to provide a more clear scope of protection of the Applicant's invention. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

*Contact Information*

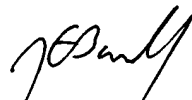
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Charles Stewart, Jr. at (703) 308-7252. The examiner can normally be reached on Monday-Friday from 8:30 a.m to 5:00 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, John E. Barlow, Jr. Art Unit 2853, can be reached on (703) 308-3126. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

cws 

October 18, 2002

  
John Barlow  
Supervisory Patent Examiner  
Technology Center 2800